

2002 Drinking Water Quality Report for Tonopah Test Range- Mancamp

Is my water safe?

Last year, Tonopah Test Range- Mancamp (Mancamp) drinking water met or surpassed all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. This report is a snapshot of 2002 water quality. Included are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies.

Where does my water come from?

The Mancamp Public Water System is operated by DynCorp. The water comes from the Stone Cabin Valley Aquifer via two wells.

Treatment Process

Mancamp's water supply is groundwater so it does not require the level of treatment associated with surface water sources. After being pumped from the wells, the water is disinfected with chlorine.

Analysis and Compliance

Every month, DynCorp personnel collect water samples from Mancamp's water supply and send them to Nevada Environmental Laboratories (NEL) for analysis. The results are reviewed and maintained by Bioenvironmental Engineering at Nellis AFB to ensure compliance with the Safe Drinking Water Act and Nevada Administrative Code. The test results are shown in the table below. Mancamp had no regulatory compliance violations in 2002. Contact Bioenvironmental Engineering at 702-653-3316 if you need more information

Why are there contaminants in my drinking water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 800-426-4791.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activity.

Contaminants that may be present in source (untreated) water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm runoff and industrial or domestic wastewater discharges.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff and residential use.
- Organic chemical contaminants, including synthetic or volatile organic chemicals, which are byproducts of industrial processes and can come from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of industrial activities.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. For more information on bottled water quality, call the International Bottled Water Association at 800-WATER11.

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline at 800-426-4791.

Frequently Asked Questions

If tap water is really of good quality, why does it taste the way it does?

Our water's taste is caused by naturally occurring minerals and chlorine. The chlorine is added to keep the water safe from bacteria. Water quality is best measured by the amount and concentration of contaminants. We have very few contaminants in our drinking water and those that are present are within Safe Drinking Water Act limits.

Do I need to use a water treatment system or drink bottled water?

Not unless you want to improve your tap water's taste or remove the minerals that cause it to be "hard". (Water is considered hard if the mineral concentration is 100 ppm or more; the average hardness in the Las Vegas Valley is 300 ppm.) While many people prefer the taste of bottled water, tap water is subject to more stringent quality standards and is tested more frequently. Additionally, the cost of the average liter of bottled water is more than 1,000 times that of the same amount of tap water. People with medical conditions affecting their immune system should consult a physician to determine whether a supplemental treatment system is appropriate. For additional information on home water treatment systems, contact the Southern Nevada Water Authority at 702-258-7117 or visit the Web at snwa.com.

Additional Information and Input

If you would like a copy of this report or have questions, please contact the Public Affairs Office, Mr. Michael Estrada at 702-652-2750 or 800-859-3804, or Bioenvironmental Engineering at 702-653-3316. Questions and comments can also be mailed to the Public Affairs Office at: AWFC/PA, 4370 N. Washington Blvd., Suite 223, Nellis AFB, NV 89191-7078.

For additional information on the quality of your water, call SNWS at 702-564-7697 or go to SNWA's website at snwa.com. Information on Nevada's Safe Drinking Water Program is available from the Nevada Bureau of Health Protection Services at 775-482-3997. General information on drinking water can be found on the EPA's website at epa.gov/safewater.

Water Quality Data Table

The table below lists the drinking water contaminants that were detected. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the 2002 calendar year. The EPA or the state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

REGULATED CONTAMINANTS				The year of analyses is noted below.	
SUBSTANCE	RANGE	AVERAGE	MCL (EPA LIMIT)	MCLG (EPA GOAL)	Possible Source
Arsenic (2002)	19 – 33 ppb*	25 ppb*	50 ppb (10 ppb in Jan 2006)	None	Erosion of natural deposits
Nitrate (as N) (2002)	1,100 – 2,600 ppb	1,800 ppb	10,000 ppb	10,000 ppb	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits
Nitrite (as N) (2002)	100 – 300 ppb	200 ppb	1,000 ppb	1,000 ppb	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits
Gross Alpha Activity (2001)	1.4 – 3.3 pCi/L	2.2 pCi/L	15 pCi/L	None	Erosion of natural deposits
Gross Beta Activity (2001)	5.6 – 7.9 pCi/L	6.7 pCi/L	50 pCi/L**	None	Erosion of natural deposits; decay of man-made deposits
Radium 226 and Radium 228 (combined) (2001)	0.7 – 2.2 pCi/L	1.4 pCi/L	5 pCi/L	None	Erosion of natural deposits
Lead (2002)	ND – 18 ppb	7 ppb (90 th percentile value)	15 ppb***	0	Corrosion of household plumbing systems; erosion of natural deposits
Copper (2002)	9 – 91 ppb	88 ppb (90 th percentile value)	1,300 ppb***	1,300 ppb	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Total Coliform (2002)	no monthly positive samples	<1 monthly positive sample	1 monthly positive sample	0	Naturally present in the environment
Fluoride (2002)	1,200 – 1,300 ppb	1,300 ppb	4,000 ppb (2,000 ppb recommended)	4,000 ppb	Erosion of natural deposits; water additive which promotes strong teeth

* Some people who drink water containing arsenic in excess of the maximum contaminant level (MCL) over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer. Projects for the design and construction of treatment units that will reduce the arsenic level in the drinking water to below the regulatory limit of 10 ppb by 2006 have been programmed.

** The actual MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/l to be the level of concern for beta particles.

*** Action Level: 90% of samples taken must be below this amount.

NON-ENFORCEABLE REGULATED CONTAMINANTS (2002)			
SUBSTANCE	RANGE	AVERAGE	SECONDARY STANDARD (RECOMMENDED)
Chloride	18 – 38 ppm	29 ppm	250 ppm
Sulfate	33 – 49 ppm	41 ppm	250 ppm
Total Dissolved Solids	255 – 325 ppm	289 ppm	500 ppm
pH	7.89 – 7.94 ppm	N/A	6.5 – 8.5
Iron	52 – 190 ppb	104 ppb	300 ppb
Manganese	ND – 10 ppb	3 ppb	50 ppb
Zinc	ND – 9 ppb	2 ppb	5,000 ppb
UNREGULATED CONTAMINANTS			
SUBSTANCE	RANGE	AVERAGE	
Magnesium (2002)	2 – 3 ppm	3 ppm	
Sodium (2001)	65 – 66 ppm	66 ppm	
Important Definitions:		<p>Maximum Residual Disinfectant Level (MRDL) – The highest level of a disinfectant allowed in drinking water.</p> <p>Maximum Residual Disinfectant Level Goal (MRDLG) – The level of a drinking water disinfectant below which there is no known or expected risk to health.</p> <p>Action Level – The concentration, which, if exceeded, triggers a treatment, or other requirement, which a water system must follow.</p> <p>Variance – State or EPA permission not to meet an MCL or a treatment technique under certain conditions.</p> <p>Treatment Technique – A required process intended to reduce the level of a contaminant in drinking water.</p> <p>ND – Not detected</p> <p>Disinfection by-product – A substance created by chemicals or processes used for disinfection.</p> <p>NTU – Nephelometric Turbidity Unit – A measurement of water’s clarity</p> <p>ppb – Part per billion – A unit used to describe the levels of detected contaminants. Equivalent to about 1 dissolved aspirin tablet in a 100,000-gallon (25 meter) swimming pool. Same as micrograms per liter (ug/l).</p> <p>ppm – Part per million - A unit used to describe the levels of detected contaminants. Equivalent to about ½ of a dissolved aspirin tablet in a full bathtub of water (about 50 gallons). Same as milligram per liter (mg/l).</p> <p>pCi/L – Picocuries per liter - a measure of radioactivity. Low levels of radiation occur naturally in many water systems, including the Colorado River.</p> <p>N/A – Not applicable</p>	
<p>National Primary Drinking Water Regulations – National Primary Drinking Water Regulations (NPDWRs or primary standards) are legally enforceable standards that apply to public water systems. Primary standards protect public health by limiting the levels of contaminants in drinking water.</p> <p>National Secondary Drinking Water Regulations – National Secondary Drinking Water Regulations (NSDWRs or secondary standards) are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. The U.S. Environmental Protection Agency recommends secondary standards to water systems but does not require systems to comply.</p> <p>Unregulated Contaminants – These contaminants are not presently subject to any proposed or promulgated national primary drinking water regulation (NPDWR).</p> <p>Maximum Contaminant Level (MCL) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to Maximum Contaminant Level Goals (MCLGs) as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.</p> <p>Maximum Contaminant Level Goal (MCLG) – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.</p>			